Western Australian Auditor General's Report

Energy Smart Government

Report 6 – June 2010

THE PRESIDENT
LEGISLATIVE COUNCIL

THE SPEAKER
LEGISLATIVE ASSEMBLY

PERFORMANCE EXAMINATION – ENERGY SMART GOVERNMENT

This report has been prepared for submission to Parliament under the provisions of section 25 of the *Auditor General Act 2006*.

Performance examinations are an integral part of the overall performance auditing program and seek to provide Parliament with assessments of the effectiveness and efficiency of public sector programs and activities thereby identifying opportunities for improved performance.

The information provided through this approach will, I am sure, assist Parliament in better evaluating agency performance and enhance parliamentary decision-making to the benefit of all Western Australians.

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AUDITOR GENERAL
30 June 2010

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Auditor General's Overview

Energy efficiency can deliver significant benefits for the community. It reduces our impact on the environment and it saves money. To realise these benefits for the community, it is important that the government show leadership.

The principle of leading by example has underpinned the Energy Smart Government program since its introduction in 2002. The program sought a 12 per cent reduction in agency energy consumption over five years. Many energy saving opportunities were identified with clear payback periods, but not enough of these opportunities were taken. This means that many energy saving opportunities still exist. With the rapid rise in the cost of energy, there are new cost effective opportunities for agencies to consider.

It is good business practice and a reasonable expectation of the public that energy efficiency form part of every agency's culture. At a time when agency budgets are under pressure, spending more in the short term to make savings in the medium term is a smart decision. Effective strategic direction and support will be crucial in making sure that smart decisions are made across government.

Executive Summary

Background

Reducing energy use saves money. Reducing energy consumption is the best way for most agencies to minimise the impact of rising energy prices on their budgets. Reducing consumption also offers agencies a chance to show a commitment to improving efficiency and minimising waste. Good energy management should be a part of everyday agency activity. Reducing energy consumption also helps reduce greenhouse gas emissions.

At a time when all governments are asking their communities to behave in environmentally responsible ways, being energy smart can show that government is doing its bit by reducing its environmental footprint.

The Energy Smart Government (ESG) program, introduced in July 2002, was intended to bring a focus to energy efficiency within government to help drive change. The program explicitly highlighted the important role agencies had in leading by example. The Sustainable Energy Development Office (SEDO), a division within the Office of Energy, was primarily responsible for delivering government's sustainable energy policy, with the Energy Smart Government program being an integral part.

The ESG program set a target of reducing energy consumption by 12 per cent over five years in every agency with 25 or more full-time employees. The program included a range of actions to help agencies identify and reduce energy consumption such as funding to replace high energy consumption equipment with lower consuming equipment. Changing behaviour, such as turning off equipment when not in use, was also seen as a critical component to success. The first phase of the program ran for five years and, with a number of changes, has moved into its second phase.

In addition to the ESG program, the State Government has recently committed to the National Strategy on Energy Efficiency. This strategy provides national commitments in four areas including making buildings more energy efficient, reducing impediments to the uptake of energy efficiency and government leading the way.

This performance audit examined whether the ESG program was effectively designed and implemented to achieve energy efficiency goals.

Audit Conclusion

The ESG program was designed to achieve a 12 per cent reduction in government's energy consumption by 2006-07. While government reduced its consumption by 0.1 per cent during a period of significant growth, it fell short of its overall target. Achieving reductions in energy consumption would have saved government money and reduced greenhouse gas emissions.

The design of the program contained the elements to achieve reductions with one-third of participating agencies reporting reductions of 12 per cent or more. Their success was offset by a lack of progress among the larger energy consuming agencies. A lack of effective strategic management and accountability also contributed to the failure to achieve overall program goals.

The program identified a range of energy saving opportunities with clear payback periods across agencies. Very few were implemented by agencies and most still remain as opportunities. The second phase of the program has not been sufficiently modified to address the shortcomings of the first and it is unlikely to realise these opportunities.

Key Findings

- Government did not achieve its target of a 12 per cent reduction in energy consumption by 2006-07. The actual reduction in energy consumption was 0.1 per cent.
- Achieving the program's phase one targets would have resulted in gross savings of $25 million in energy costs over the first five years. Had agencies managed to achieve the target and maintain it at that level, an additional $25.4 million in energy costs could have been avoided in the past two years. Reductions in greenhouse gas emissions would also have been significant.
- A lack of energy savings by larger energy consuming agencies offset reductions made by smaller consuming agencies, so overall program targets were not met.
- A key achievement of the ESG program was it established recording and reporting of energy consumption across government. Before this, most agencies simply paid their utility bills and were unaware how much energy was being consumed or whether what they were paying for was an accurate reflection of their consumption.
- SEDO was not sufficiently strategic in its management of the program and in using incentives and penalties to encourage agencies to reduce consumption and to deliver accountability where agencies did not. There were no consequences for failing to achieve expected results.
- Despite a significant number of energy audits performed by energy consultants, few agencies have pulled the information together in a way that enables them to identify inefficiencies across the agency. This makes it difficult to easily target and implement improvements across government.
- Few of the energy audit recommendations for reducing consumption have been actioned, leaving a substantial number of energy efficiency upgrades outstanding. Agencies advised that they did not often implement energy efficiency projects due to:
    - limitations with government purchasing contracts which made it difficult to buy energy efficient products
    - a reluctance to invest in energy efficient upgrades on leased premises within a few years of their lease expiry date
    - a lack of agency resources and an unwillingness to accept capital advance funding from SEDO.
- The current phase of the ESG program is unlikely to realise existing energy saving opportunities or identify new ones because it does not adequately address the shortcomings of the initial program. In the past two years energy consumption has increased by an additional three per cent at a cost of $19 million.

- The ESG program has provided a base of consumption data. However in many cases it is not being used to drive decision-making or to identify areas to focus improvement because it is not sufficiently detailed.
- Many agency Energy Management Plans are inadequate to be used as a decision-making tool. Few contain an analysis of current energy consumption patterns, a quantification of where savings can be achieved, or how initiatives will be funded.

Recommendations

- **The Office of Energy should review the incentives and accountability arrangements under the ESG program based on lessons learned from the first phase of the program.**
- **Government agencies should determine an appropriate payback period for identified energy efficiency initiatives and ensure all projects within that period are carried out.**
- **Agency energy management plans should be based on an analysis of energy consumption, contain clear, measurable targets for improvement and identify how targets will be achieved.**
- **Agencies and the Office of Energy should ensure energy consumption data is suitable for identifying and targeting areas for improvement.**
- **The electricity costs of products should be included in the calculation of life cycle cost and factored into procurement decisions.**
- **Government building designs and upgrades should address energy efficiency and include energy efficient products in building fit-outs.**

Improving energy efficiency can save money and help the environment

Introduction

Reducing energy consumption saves money and helps reduce greenhouse gas emissions. Countries around the world are seeking agreement and making formal commitments to reducing emissions. For its part, the Western Australian Government made commitments to becoming more sustainable and reducing its carbon consumption.

In July 2002, government established an Energy Smart Government (ESG) program to "*realise ongoing savings in agency energy operating budgets and to quantify and publicly report on those savings*". The requirements of the ESG program were communicated to agencies through a Premier's Circular which committed to a five year, 12 per cent reduction in 'stationary' energy. A Premier's Circular is a policy statement published by government outlining what is expected of agencies and the impact on them. Stationary energy is defined as all energy production and consumption including electricity and direct uses of energy for heating and industrial processes (but excluding transport).

Between 2002 and 2004, government launched a number of initiatives, with *Hope for the future – the Western Australian State Sustainability Strategy* at the centre. This strategy was developed to "ensure that the way we govern is driving the transition to a sustainable future". Some of the key actions were to:

- develop a Sustainability Act
- demonstrate leadership by requiring government agencies to adopt the *Sustainability Code of Practice* and develop a sustainability action plan
- embed sustainability into the planning system.

In September 2004, government issued *Leading by example – the Sustainability Code of Practice for Government Agencies and Resource Guide for Implementation*. This highlighted a commitment to "embracing sustainability as a fundamental driver towards a better future for all Western Australians".

The *Code of Practice* addressed a wide range of sustainability issues including energy, procurement, waste, water, vehicles and travel, government buildings and other built assets. It established targets and policies for agencies to meet and follow. The ESG program was brought under the Code as the basis for government's policy on energy consumption. Eight years in, the program is currently in its second phase.

The first phase of the program required government agencies with 25 or more FTEs to reduce energy consumption by 12 per cent from their 2001-02 level by 2006-07. It established mandatory annual reporting by each agency of total energy costs and consumption to the Sustainable Energy Development Office (SEDO), a division within the Office of Energy.

During the first five years of the ESG program, SEDO reported that the public sector grew over 16 per cent. Such growth was a significant challenge to achieving the 12 per cent reduction in energy consumption, staffing levels being a key driver of energy use. Throughout this period there was no change in the policy requirement of achieving a 12 per cent absolute reduction. Given this growth, agencies needed to understand their energy consumption and target key areas for improvement with

initiatives that delivered a clear payback. It also presented an opportunity for energy efficiency to be prominent in the design and provision of additional facilities and equipment needed to accommodate this growth.

The second phase of the program started in 2007-08. It does not prescribe a set energy reduction target as the previous phase did. The second phase focuses on reducing the intensity of energy use. Energy intensity is a measure of energy consumption relative to total output (per square metre, per student enrolled, per full-time employee). The purpose of using an energy intensity measure is to factor in future public sector growth. Annual reporting to SEDO is still mandatory, but performance is now measured as energy intensity, with energy use per FTE being the primary indicator.

This phase of the program also requires agencies to develop an Energy Management Plan (EMP) to define and achieve energy savings. Agency EMPs are approved by their chief executive officer and forwarded to SEDO. Incentives and penalties included in the first phase of the ESG program have been removed under this second phase.

In addition to the State Government's commitment to energy efficiency, the Commonwealth Government recently agreed to implement a national energy efficiency strategy, demonstrating Australia's ongoing commitment.

Examination focus and approach

The audit addressed the question "was the Energy Smart Government program effectively designed and implemented to achieve energy efficiency goals"? To answer this question three main lines of enquiry were used:

- Was the Energy Smart Government program designed with clear goals and accountabilities to achieve energy efficiency?
- Did agencies effectively implement the Energy Smart Government program to achieve energy efficiency goals?
- Did agencies effectively monitor and report on results and adapt the program as needed?

The purpose of the performance audit was not to comment on individual agency actions within the ESG program, but rather draw conclusions at a whole of government level. SEDO was assigned primary responsibility for the program. We also reviewed a sample of eight government agencies.

The sample included the top five energy consuming agencies, representing 76 per cent of total energy consumption in government in 2008-09, specifically the departments of Health, Education, Corrective Services and Culture and the Arts, as well as Western Australia Police. We selected these agencies because if government was to achieve its goal these agencies needed to perform well.

The audit sample also included VenuesWest and Polytechnic West, two agencies that achieved the 12 per cent reduction target and the Office of Energy, a typical single site agency which also achieved the target. These agencies were selected in order that audit findings would be relevant to the whole-of-government.

In conducting the audit we:

- performed detailed file reviews at the agencies involved and SEDO to determine the primary activities taking place
- conducted interviews with relevant staff at each of the sample agencies and SEDO
- analysed data reported in annual reports as well as raw data provided by SEDO and agencies.

We have used publicly reported data to develop our findings and inform our recommendations. Although we address concerns over the overall accuracy of this data in this report, it is included because it represents the best information available at the time of our audit. The 2008-09 data used in the audit is the data provided by agencies to SEDO, but has not yet been reported to Parliament.

We conducted this audit in accordance with the Australian Auditing Standards.

Agency Response

The Office of Energy notes the report mainly focuses on the initial target of a 12% reduction in total energy consumption. This target was set at a time of increasing scope and output of services delivered by agencies, responding to substantial economic growth in Western Australia.

The program was later realigned to focus on improvements in energy intensity in government operations, as this measure is independent of growth in activity.

The shift to a focus on energy intensity instead of total energy resulted in substantial improvements, with 86% of agencies improving energy intensity by an average of 32% between 2001/02 and 2008/09.

The purpose of the program was to focus on improving energy consumption in all agencies larger than 25 FTEs, rather than on a whole-of-government bulk saving.

The Office of Energy strongly supports the finding that there remains large scope for government agencies to further improve their energy intensity and reduce greenhouse gas emissions.

Should this program be reinstated, the findings of the review will assist in developing a more effective program design.

The first phase of the program did not result in a reduction in energy consumption largely because energy savings were identified but not implemented

Findings

- Government did not achieve its target of 12 per cent reduction in energy consumption.
- Achieving the target, then maintaining consumption at those levels, would have saved government $50 million in gross energy costs over the past seven years and reduced greenhouse gas emissions by nearly 350 000 tonnes.
- Twenty agencies succeeded in meeting the target, but their reductions were offset by a lack of progress among larger energy consuming agencies.
- There were no consequences for failing to achieve expected results.
- Some agencies initially focused on seeking recognition for past savings rather than identifying opportunities for new efficiencies.
- SEDO had financial incentives to distribute but did not use them adequately to leverage success.
- Many opportunities for energy savings have been identified but still remain to be implemented.

Government did not achieve its target of 12 per cent reduction in energy consumption

In 2002, government set out a requirement that agencies reduce energy consumption by 12 per cent over five years. At the end of the five year program, government achieved less than 0.1 per cent overall reduction in energy consumption. This fell short of the target government had set itself. Figure 1 compares the actual reported result against the targeted results.

The reduction of 12 per cent was to be based on agencies' 2001-02 actual energy consumption. This was adjusted in some instances to allow for prior recognition of energy efficiency achievements by agencies. Where the baseline was adjusted by SEDO, progress in achieving the 12 per cent reduction was measured against this elevated baseline. The result of adjusting some agencies' baselines was that the overall government baseline was set above actual consumption levels for 2001-02. This baseline was used to calculate energy reductions achieved by government.

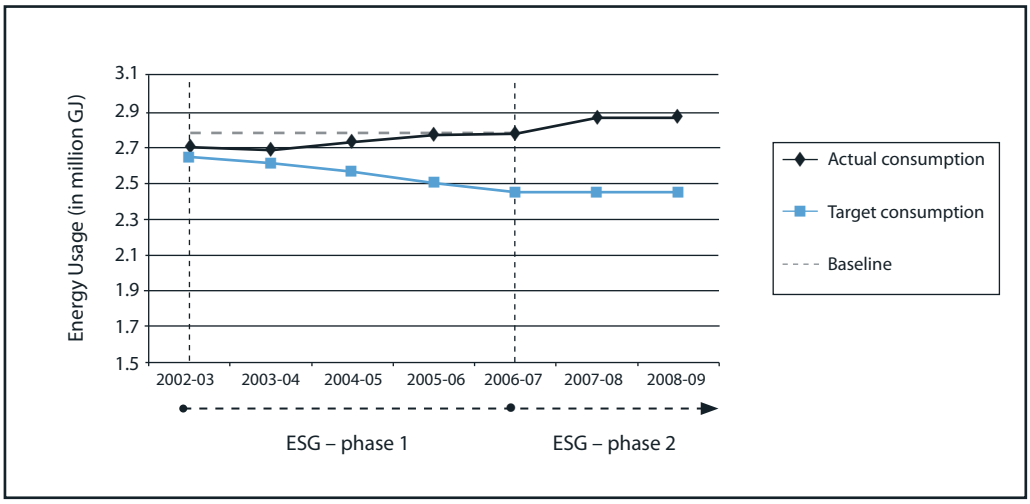

Figure 1: Government's reported energy consumption against target

In the first year of the program consumption fell slightly, however overall consumption increased in the first phase of the program. It has risen further in the first two years of the program's second phase. The figure also shows the baseline reported by SEDO in the first year of the ESG program. This baseline is higher than the actual 2001-02 consumption figures because some agencies received recognition of prior energy savings.

The ESG program raised the profile of energy efficiency within government agencies. Before the program began, few agencies considered energy efficiency as part of their business. An achievement of the program was it compelled agencies to record and report energy consumption. Before this, most agencies simply paid their utility bills and were unaware how much energy was being consumed or whether what they were paying for was an accurate reflection of their consumption.

Other Australian government's had targets as well, including the Commonwealth and New South Wales, each having a reduction target of 25 per cent (intensity reduction target and absolute reduction target respectively), and Victoria having an energy intensity reduction target of 15 per cent.

Achieving the target, then maintaining consumption at those levels, would have saved government $50 million in gross energy costs over the past seven years and reduced greenhouse gas emissions by nearly 350 000 tonnes

Failing to achieve its target in the first phase of the program meant government spent $24.9 million in additional energy costs. Had agencies managed to achieve the targeted reduction and maintained energy consumption at that level during the current phase, an additional $25.4 million in energy costs could have been avoided in the past two years (Figure 2). Over the same period, the additional greenhouse gases emitted as a result of failing to achieve the target was nearly 350 000 tonnes.

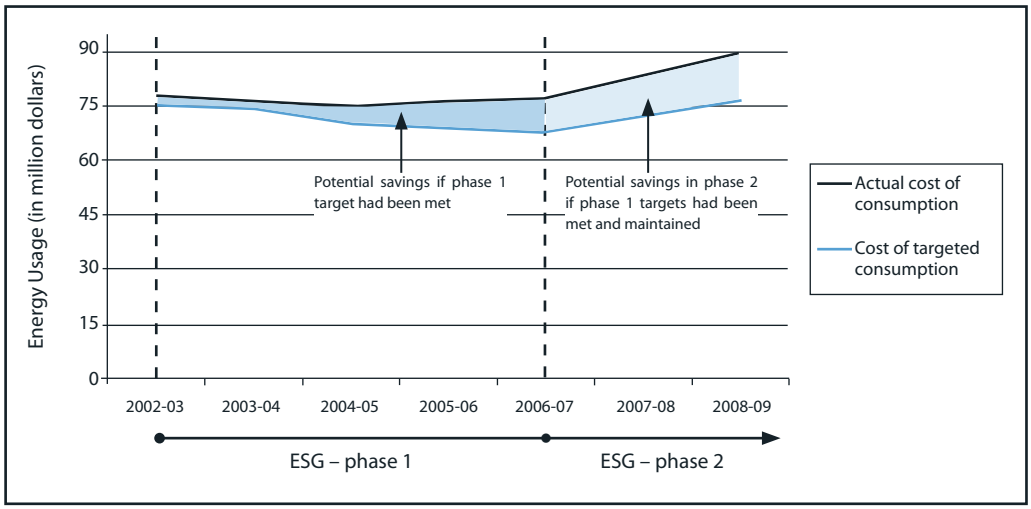

Figure 2: Total cost of government's energy consumption against target

This figure shows the actual cost of energy consumption under the ESG program and the estimated cost if the targeted consumption levels had been reached. The difference between these amounts is the potential savings that could have been made had consumption reduction targets been met in phase one and maintained throughout phase two.

Government spent nearly $90 million in 2008-09 on energy costs, with electricity comprising about 70 per cent. With electricity prices rising by approximately 20 per cent in 2009-10 and 2010-11, the increased cost to government is approximately $18 million per year if government's electricity use remained steady. Reducing consumption is really the only way open to agencies to minimise the impact of rising energy prices on their budgets.

At the end of the first phase of the program, SEDO reported in its 2006-07 annual report that achievements in the ESG program "yielded direct energy cost savings of more than $13 million". The 'savings' are notional rather than real cost reductions because they are a comparison with the elevated baseline and not the actual level of consumption in 2001-02.

Achieving reductions in energy use often involves making capital investment. In the first phase of the program government committed $16 million in capital advance funding with an additional $400 000 each year of facilitation grants to assist agencies in achieving their goal.

Although the primary requirement of the program was a reduction in energy consumption, greenhouse gas emissions were also calculated for each year of the program. Had agencies been successful in achieving the 12 per cent reduction in energy consumption, 173 000 tonnes of greenhouse gas emissions, (seven per cent) would have been avoided during the first phase and 175 000 tonnes, (15 per cent) over the first two years of the second phase.

Twenty agencies succeeded in meeting the target, but their reductions were offset by a lack of progress among larger energy consuming agencies

Although government did not achieve its target overall, SEDO reported that 20 out of 62 agencies successfully achieved consumption reductions of 12 per cent or more, demonstrating that the program could achieve the required reductions. However, because the combined energy consumption of the top five energy consumers increased by 0.4 per cent over their baselines by the end of the first phase, the success of these smaller energy consuming agencies was negated.

Three agencies within our sample demonstrated varied ways of achieving success. VenuesWest (Case example 1), Polytechnic West (Case example 2) and the Office of Energy all exceeded the government target.

All three agencies took a different approach to achieving the goal, but all had a designated staff member focused on improving energy efficiency as part of their role within the agency. They all used energy audits to identify where energy was being used within their facilities and took action to target and reduce energy usage.

CASE EXAMPLE 1	VenuesWest

VenuesWest (formerly WA Sport Centre Trust) was responsible for four venues during the first phase of the ESG program. These were:

- Arena Joondalup
- Kwinana Motorplex
- Midvale Speedrome
- Challenge Stadium

VenuesWest is now responsible for two additional facilities, the State Athletics Stadium and the State Basketball Centre.

VenuesWest achieved a 47 per cent reduction in energy consumption over the first five years of the (ESG) program. Its approach was to target its largest energy consuming venue and focus effort in reducing energy consumption at that site.

One venue, Challenge Stadium, was responsible for almost 80 per cent of total energy consumption. This was primarily due to keeping its five swimming pools at a required and constant 26.5 degree temperature. VenuesWest conducted a feasibility study of the options available, funded by a facilitation grant.

VenuesWest then utilised a capital advance from SEDO to fund a Geothermal heating project at a cost of $1 million. The advance was repaid using the energy reduction savings of $200 000 a year over a five year period.

Later, VenuesWest identified further energy reductions through energy audits at Challenge Stadium and Arena Joondalup, using several smaller capital advances to implement recommendations from these audits. This included installing additional skylights to increase natural lighting, installing pool blankets, installing solar water heating systems, upgrading the lighting system with more efficient fittings and improvements to the air conditioning systems.

CASE EXAMPLE 2	Polytechnic West

Polytechnic West (formerly Swan TAFE) achieved a 20 per cent reduction in energy consumption over the first five years of the ESG program. Its approach was to designate a sustainability officer whose role was to drive energy reduction initiatives across the campus. The college achieved its energy reduction targets primarily through behavioural change and minor building upgrades. Polytechnic West took advantage of the facilitation and capital advance funding available through SEDO for projects such as energy audits, replacing gas heaters with updated reverse cycle air conditioners, de-lamping existing light fittings and the replacement of light globes with energy efficient globes, installing timers to electrical items and a building management system upgrade.

In addition to the small-cost alterations to the buildings, the campus reduced its energy consumption through other efforts such as switching lights off when they are not in use, setting automatic computer shut downs, buying energy efficient equipment when replacing broken ones and reconfiguring night classes into fewer buildings.

These low cost or cost neutral measures are the types of initiatives that could be implemented across many government agencies.

There were no consequences for failing to achieve expected results

Accountability for achieving the goals of the ESG program was weak, and there were no practical consequences for agencies if they did not reduce energy consumption in line with targets. Reporting agency results to Parliament was the main mechanism for securing accountability but this proved ineffective as it focused on highlighting individual agency achievements rather than the lack of progress towards the overall target. Under the program agencies could be fined for lack of progress but this provision was never used.

The Premier's Circular for the ESG program put responsibility for achieving government's target on individual agency's chief executive officers. SEDO was responsible for tabulating agency results and preparing a report to Parliament. SEDO relied on agencies to ensure the data was accurate.

SEDO expected that publicly reporting individual agency results would be sufficient incentive for agencies to achieve reductions. However, it became clear early in the ESG program that results were not being achieved. Reporting initially highlighted the lack of success of agencies, but later it changed to focus on highlighting agency achievements.

As early as the second annual report in 2003-04, SEDO started reporting agency achievements by way of energy intensity measures, as well as energy consumption. Energy intensity measures reflect efficiency (consumption per FTE) and can enable agencies to show improvement even if their consumption is rising. SEDO felt reporting energy intensity was a better reflection of achievement than just reporting on absolute energy consumption. This focus on energy intensity results continued as agencies became less likely to achieve the overall absolute reduction target.

Data on both energy intensity and consumption provided SEDO with important information for identifying and focusing on agencies that would most benefit from their expertise. However, we saw little evidence of SEDO using this information to take proactive action with high energy use agencies. We also saw no evidence that SEDO recommended changes to the ESG program to increase the likelihood of achieving the 12 per cent target or to scale back expectations.

SEDO also had the power to recommend to the Minister for Energy that a financial penalty be imposed on agencies not achieving the energy reduction requirement and not having an adequate reason. The fine provision was equivalent to the amount of savings agencies would have received had they met their target. SEDO never enacted penalties even though many agencies were not achieving results.

Some agencies initially focused on seeking recognition for past savings rather than identifying opportunities for new efficiencies

Government recognised some agencies had been proactive in becoming more energy efficient prior to establishing the ESG program. In order to recognise these achievements, agencies demonstrating energy savings from 1 July 1998 could receive credit for these savings. Government did not specify how such savings would be offset against the 12 per cent reduction.

To recognise prior achievements for agencies that could demonstrate savings, SEDO modified agencies' 2001-02 actual consumption by increasing them to reflect energy savings achieved since 1 July 1998. These 'negotiated' baselines were used to determine the remaining reductions needed to meet the target. Agencies and SEDO took up to eight months to work through some of these adjustments and negotiate a baseline which both felt reflected agency past achievements.

Some agencies had difficulty reporting energy consumption early on as they did not have reporting structures in place to capture this information. One large agency was given a six per cent credit but insufficient evidence was on file to quantify that their prior achievements amounted to this saving. Another agency had 31 changes to its data, including its baseline calculation, in an 18 month period, with the baseline continuing to be adjusted up to two years into the program.

SEDO had financial incentives to distribute but did not use them adequately to leverage success

SEDO had financial incentives available to them to assist agencies in achieving results, but was not effective in using them. SEDO did not target incentives to where the savings were greatest, and the take up of interest free capital advances by agencies was low, leaving funding that could have resulted in long term savings unused.

There were two types of financial incentives available to agencies under the ESG program, facilitation grants and interest free capital advances. SEDO had full discretion in applying these tools. We expected SEDO to be strategic in utilising these incentives to maximise their potential in meeting the government target.

The facilitation grant program was a non-repayable grant aimed at identifying energy saving opportunities. It included funding for energy audits, consultancy advice, feasibility studies, installation of sub-meters and pilot/demonstration projects. Each year SEDO had $400 000 available for this purpose. Facilitation grants had strong support, with most agencies applying for at least one grant throughout the first five years. Government spent approximately $2 million in facilitation grants over the life of the program.

We found SEDO did not take a strategic approach in disbursing facilitation grants for projects but rather dispersed funds more on a first come first served basis. SEDO did not target the top energy consumers or focus their grants to assist the worst performing agencies.

Capital advances were also available for implementing energy efficient projects. Under this part of the program, a total of $16 million of financing was available. Agency repayments were based on the estimated annual energy savings expected to be achieved by the project (payback period).

We expected the grants to be more strongly linked with capital advance funding so agencies would use the capital advance to fund the projects identified by energy audits. However, few agencies took advantage of the capital funding and the capital advance program was not well utilised by agencies, with only about $4.2 million used. This left nearly $12 million for energy efficient upgrades unused.

Many opportunities for energy savings have been identified but still remain to be implemented

During the first phase of the program, many agencies had at least one energy audit using a facilitation grant to identify potential energy projects. Very few of these projects were implemented despite the availability of capital advance funds and the majority of projects having a five year or less payback. We expected agencies, having identified energy efficient projects, to have worked towards implementing those deemed to be cost effective.

These upgrades have still not been implemented eight years into the program. Agencies indicated they were not prepared to take the risk of energy efficient upgrades because they were not convinced that the recommendations were achievable within either the cost or payback periods.

Typically, those responsible for administering the ESG program within an agency were unable to implement the identified projects because their finance departments were less convinced of the estimated savings. As well, the structure of the capital advance funding caused agencies concern in that the advance was required to be paid back to SEDO whether or not the estimated savings were realised. Some agencies were not prepared to take on the risk.

Agencies also indicated they were limited in implementing projects by procurement options that did not include the most energy efficient products. Often, when replacing old plant and equipment, agencies would look for energy efficient products, however agencies advised that these were often not included in the current Common Use Agreements (CUAs) which agencies are required to use when purchasing products. Agencies advised that in order to purchase energy efficient products not listed on the CUA, a business case was needed, which they considered time consuming and required technical expertise.

Another barrier agencies identified to implementing recommendations from energy audits was linked to building leases. Agencies within a few years of the end of their lease were reluctant to invest in energy efficient upgrades with a payback period longer than the time left on the current building lease. These upgrades were often not implemented, despite agencies renewing their lease.

During the first few years of the ESG program, the WA public sector was experiencing significant growth. This resulted in new facilities being built, opening up an opportunity for the design and fit-out of these buildings to encompass energy efficient technologies. Some agencies indicated that products which would have made new buildings more energy efficient were often removed from the fit-out to maintain the project budget. These additions, while initially increasing the fit-out cost of a project, had the potential to reduce energy consumption and cut running costs into the future.

SEDO received a copy of energy audits funded by facilitation grants. We found many energy audits contained similar recommendations such as installation of lighting sensors, setting air conditioners to specific temperatures during winter and summer and de-lamping high lit areas. We expected these recommendations to have been summarised by SEDO to recommend whole-of-government upgrades, but we found they were not.

We spoke with the Department of Sustainability and Environment (DSE), Victoria who were responsible for administering a similar program. Unlike SEDO, DSE did analyse the recommendations from individual agency energy audits and used these to identify possible whole-of-government energy efficiency upgrades. An example of this was lighting upgrades, where DSE bought bulk lighting and paid for and organised installation across their government agencies, resulting in energy reductions. This approach allowed the Victorian Government to exceed its 15 per cent energy intensity reduction target.

Changes to the program make it less likely to drive change or realise existing energy saving opportunities

Findings

- Changes to incentives and accountability for phase two of the program did not reflect what was needed to improve performance and achieve reductions.
- Energy consumption has increased three per cent at a cost of $19 million from 2007-08 to 2008-09.
- Consumption data gathered under the program is not being widely used for decision-making.
- Most Energy Management Plans have limited use as a tool for achieving energy efficiency improvements.

Changes to incentives and accountability for phase two of the program did not reflect what was needed to improve performance and achieve reductions

The second phase of the ESG program began in July 2008, one year after completion of the previous phase. Despite achieving no overall reduction in energy consumption in the first phase, the changes made to the program for phase two have not addressed the shortcomings of the first phase. Some of the potentially effective elements of the first phase have been removed. The second phase contains no incentives or penalties to encourage improvements in energy usage, and no overall performance target has been established. It is therefore unclear how success will be measured.

Our audit found that no review was done of the first phase of the ESG program to identify its strengths and weaknesses. Such information could have been used in designing the second phase. SEDO surveyed agencies involved in the program and generated an options paper with six different options for moving forward. This did not, however, include a critical analysis of the ESG program's performance to date nor did it make a recommendation to government on which option should be implemented.

Phase two focuses on Energy Management Plans. Premier's Circular 2008/11 requires agencies to develop Energy Management Plans that will "identify and implement energy efficiency initiatives". To integrate energy management into agency business and recognise the importance of support from senior management, EMPs are required to be signed off by the agency's chief executive officer and forwarded to SEDO. Agency reporting requirements remain, although they will not be benchmarked against an overall target.

Under the new phase, an absolute consumption reduction target for all government agencies has been replaced by agencies determining their own energy intensity targets. While the majority of agency EMPs had reduction targets of less than 10 per cent, 16 of the agencies have either no target or a target to maintain current energy usage. One is aiming to hold its energy consumption increases to 10 per cent. Facilitation grants, interest free capital advance funding and penalties are no longer included.

The Premier's Circular remains in place. SEDO was integrated into the Office of Energy on 1 January 2010. Previous funding to run the ESG program, including funding for program staff, was removed from the Office of Energy's budget. SEDO is still required to ensure agencies enter consumption data annually into SEDO's reporting system.

Energy consumption has increased three per cent at a cost of $19 million from 2007-08 to 2008-09

Energy consumption has risen by 3.3 per cent in the first two years of the new phase. This, combined with a 12 per cent increase in the cost of energy between 2007-08 to 2008-09 means government spent an additional $19.1 million on energy over these first two years of phase two.

As energy prices rise, it further decreases the payback period needed for energy efficiency upgrades, opening more potential energy saving opportunities for government. In the past two years there has been an increase in electricity costs, with more announced. Given that electricity makes up a large component of government's total energy costs, the potential impact of these rises is significant.

Consumption data gathered under the program is not being widely used for decision-making

Agencies have built up a set of energy consumption data, covering eight years of reporting, but it is generally not being used to inform decision-making. We expected the data would be used to identify agencies and facilities where energy efficiency upgrades would be most beneficial. There are several factors currently limiting the use of the data for this purpose.

Firstly, the data provided by agencies met their ESG program reporting requirements but was not sufficiently detailed to enable useful analysis and monitoring by SEDO. Agencies that had detailed data could have provided it, but SEDO's reporting system, OSCAR, did not interface with commonly used agency systems, meaning the data would have had to be input manually. Providing detailed, disaggregated data manually into OSCAR was time consuming and was seen by agencies as a duplication of effort. As a result, agencies only provided high level data, limiting SEDO's capacity for analysis or monitoring.

Secondly, the data reported by agencies into OSCAR is sometimes based on a best guess or estimate. The main two factors contributing to this are a general lack of sub-metering within facilities and late billing practices either by electricity suppliers or Building Management and Works, who are responsible for leasing the majority of government buildings.

For some agencies, bills would not be available before the reporting deadline. These agencies would input an estimate of consumption for that period. In these cases, once the actual consumption amount was known they were able to go back and revise as appropriate. The lack of sub-metering made it difficult for agencies sharing a building to apportion costs between one another. While overall government consumption would be reflected accurately into OSCAR, the consumption between agencies may not.

Thirdly, some variations in agency's reporting made year-to-year comparisons difficult:

- Where agencies sub-leased out buildings to other organisations they were not required to report energy consumption, as the agency was no longer responsible for the outgoings of the property.
- Some agencies continued to add facilities that had been missed from previous reports.
- Some agencies had facilities which were de-commissioned and new facilities built, meaning different facilities were being reported each year.

We also found agencies were generally not monitoring their own energy consumption data or using the information to drive their decision-making. This is because many government agencies see recording consumption data as an add-on to their reporting requirements and only gathered the energy data to fulfil the requirements of the ESG program. By ensuring accurate data is being recorded and sufficiently disaggregated, agencies could use this information to identify their most inefficient facilities, allowing targeting of resources and driving decision-making. Largely, this did not occur but could have helped some government agencies to achieve their 12 per cent reduction target.

Most Energy Management Plans have limited use as a tool for achieving energy efficiency improvements

Energy Management Plans form a key part of the second phase of the ESG program, but most do not have the key elements that would make them an effective tool for improving energy efficiency.

EMPs are intended to show agency plans for identifying and implementing energy efficiency initiatives and are currently industry practice. The intent of the EMPs is to integrate energy management into an agency's daily business. To assist agencies in developing an EMP, a template was developed by SEDO. Twenty agencies used a facilitation grant to complete their EMP. This funding has since been rescinded.

The initial EMPs were to be submitted to SEDO for approval by 31 December 2008. SEDO signs each EMP acknowledging the agency has met the requirement to submit one and when they believe it is necessary, contact the agency informally to encourage improvements. SEDO does not review the EMPs to assess effectiveness.

Fifty-three out of 65 agencies currently participating in the program have finalised EMPs, with one additional agency recently submitting an EMP in draft form. Six are still outstanding. There are a further five agencies that have been granted exemptions from this requirement.

We reviewed each agency's EMP to determine how well they can be used as a decision-making tool. We expected the EMPs would:

- provide information and context about the operating environment of the agency
- be based on evidence such as data analysis or energy audits establishing where most energy is being consumed in the agency
- highlight what types of initiatives have already been implemented in the first program and identify further initiatives to reduce energy consumption
- establish targets based on savings expected and resources committed in implementing the recommended energy efficiency initiatives.

We found less than a quarter of EMPs included the agency's current energy consumption, or an action plan based on analysis of current consumption. Also, EMPs generally did not identify how improvement initiatives would be funded, now that funding is no longer available from SEDO. On the basis of current EMPs it is likely many identified opportunities for energy efficiency will remain unrealised.

Auditor General's Report

REPORT NUMBER	2010 REPORTS	DATE TABLED
5	Fiona Stanley Hospital Project	23 June 2010
4	Audit Results Report: Annual Assurance Audits completed since 2 November 2009, including universities and public colleges; and Compliance Audits: Managing attractive assets; Managing salary payment errors	5 May 2010
3	Public Sector Performance Report 2010 – Opinions on three 'Ministerial Notifications' – ministerial decisions to not provide information to Parliament – Registration of Medical Practitioners	5 May 2010
2	Information Systems Audit Report	24 March 2010
1	The Planning and Management of Perth Arena	10 March 2010

	2009 REPORTS	
13	Audit Results Report: 2008-09 Assurance Audits	11 November 2009
12	Fourth Public Sector Performance Report 2009 – Preliminary Examination of the Royalties for Regions Program – Accountability for Government Grants – Management of Government Purchasing Cards	11 November 2009
11	Third Public Sector Performance Report 2009 – Regulation of Firearms – Follow-up – Managing Staff Attendance in the Public Sector – Evaluation in Government	21 October 2009
10	Adult Community Mental Health Teams: Availability, Accessibility and Effectiveness of Services	14 October 2009
9	Every Day Counts: Managing Student Attendance in Western Australian Public Schools	19 August 2009
8	Opinion on Ministerial Notification: Ministerial Decision to not Provide Information to Parliament – Country Age Pension Fuel Card	19 August 2009
7	Second Public Sector Performance Report – Dangerous Goods Safety – Compliance in Western Australia's Commercial and Recreational Fisheries	25 June 2009
6	Maintaining the State Road Network	17 June 2009
5	Rich and Rare: Conservation of Threatened Species	10 June 2009
4	Coming, Ready or Not: Preparing for Large-scale Emergencies	20 May 2009
3	Audit Results Report – 31 December 2008 Assurance Audits and other audits completed since 3 November 2008	6 May 2009
2	Information Systems Audit Report	8 April 2009
1	Public Sector Performance Report 2009 – Management of Water Resources in Western Australia – Follow-up – Administration of the Metropolitan Region Scheme by the Department for Planning and Infrastructure – Management of Fringe Benefits Tax	1 April 2009

The above reports can be accessed on the Office of the Auditor General's website at www.audit.wa.gov.au

On request these reports may be made available in an alternative format for those with visual impairment.